

REMARKS

Response to the Rejections of Record under 35 U.S.C. 112

Claim 25 and dependent claim 27 were rejected under 35 U.S.C. 112, second paragraph. In response, claim 25 has been amended to clarify claim 25. Support for the amendment can be found in the instant specification at page 7 lines 26-33. Applicants submit that above submitted amendment to claim 25 overcomes the rejection of claim 25 under 35 U.S.C. 112, second paragraph.

Claim 27 was apparently rejected under 35 U.S.C. 112, second paragraph for being dependent on rejected base claim 25. Applicants submit that above submitted amendment to claim 25 overcomes the rejection of claim 27 under 35 U.S.C. 112, second paragraph.

Response to the Rejections of Record under 35 U.S.C. 103

I. Comment regarding the language of claim 1

In the Office Action dated 2/7/01, claims 1, 2, 7-10, 21, 23-27, 40 and 42 (now claims 1, 2, 21, 23-27, 40 and 42) were rejected under 35 U.S.C. 103(a) over Suzuki (UK 2-194-487 A) in view of Minowa (5,183,333). Applicants believe that claim 1 was distinguished from the prior art prior to the above amendment for reasons given hereinafter. However we have made the above shown amendment to claim 1 in order to clearly show that the detecting means detects a characteristic indicative of movement in order to determine that an ink ribbon is present. Moreover, the following remarks are given in further support of the patentability of the instantly presented claims.

It is noteworthy that in the Office Action dated August 27, 1999, the Examiner made the comment (page 6, ¶6):

With respect to the 35 USC 103 rejections, applicants argue that the cited references do not teach a detecting means detecting a characteristic indicative of movement of the ink ribbon.

Examiner's position is that the detecting means does not detect a movement of the ink ribbon as recited in claim 1. Claim 2 does not recite a detecting means detecting a characteristic indicative of movement of the ink ribbon.

Applicants submit that directly detecting movement of the ink ribbon and detecting a characteristic indicative of movement are not the same. The present invention does not describe, nor claim, directly detecting the movement of the ink ribbon. However it does describe embodiments such as: detecting movement of a rotatable support member which is indicative of movement of the ink ribbon when the ink ribbon is present; detecting the position of a movable member arranged to be in a first position when the ink ribbon is in motion and a second position when the ink ribbon is not in motion and detecting the power consumed by the drive means which is directly related to the movement of the ink ribbon. Each of these detectable characteristics are indicative of movement of the ink ribbon.

II. The Examiner Does Not Suggest Any Motivation to Combine Suzaki and Minowa for the Rejection of Claims 1, 2, 7-10, 21, 23-27, 40 and 42

To combine the teachings of prior art references, an Examiner must show a suggestion from the references to combine their teachings. See MPEP 2143.01 (and cases cited therein). For convenience, MPEP 2143.01 (and cases cited therein) is reproduced below:

2143.01 Suggestion or Motivation to Modify the References [R-1]

THE PRIOR ART MUST SUGGEST THE DESIRABILITY OF THE CLAIMED INVENTION

"There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (**The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a prima facie case of obvious was held improper.**). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (emphasis added).

In the Office Action dated February 7, 2001, the Examiner combined the prior art references Suzaki and Minowa to reject claims 1, 2, 7-10, 21, 23-27, 40 and 42. However, the Examiner did not state any basis in the references for combining their teaching. This has been held to be improper, and the rejection must be withdrawn.

III. If the Examiner Now Provides an Explanation of Any Motivation to Combine Suzaki and Minowa, then the Following Office Action Must be NON-FINAL.

Should the Examiner now provide an explanation for the combination of the prior art references Suzaki and Minowa to reject claims 1, 2, 10, 21, 23-27, 40 and 42, then the Office Action advancing the rejection must be **NON-FINAL**. The standard for making a rejection FINAL is given in the MPEP 706.07(a). For convenience, MPEP 706.07(a) is reproduced in part below:

706.07(a) Final Rejection, When Proper on Second Action [R-1]

Due to the change in practice as affecting final rejections, older decisions on questions of prematurity of final rejection or admission of subsequent amendments do not necessarily reflect present practice.

Under present practice, second or any subsequent actions on the merits shall be final, **except where the examiner introduces a new ground of rejection**

that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).

MPEP § 2142 (and the cases cited therein) provides the standard by which the PTO must use to make a rejection under 35 USC 103. For convenience, MPEP § 2142 is reproduced in part below (emphasis added by Applicant(s)):

ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections.

When the motivation to combine the teachings of the references is not immediately apparent, **it is the duty of the examiner to explain why the combination of the teachings is proper.** Ex parte Skinner, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986). A statement of a rejection that includes a large number of rejections must explain with reasonable specificity at least one rejection, otherwise the examiner procedurally fails to establish a prima facie case of obviousness. Ex parte Blanc, 13 USPQ2d 1383 (Bd. Pat. App. & Inter. 1989) (Rejection based on nine references which included at least 40 prior art rejections

without explaining any one rejection with reasonable specificity was reversed as procedurally failing to establish a prima facie case of obviousness.).

Accordingly, should the Examiner now provide an explanation of the motivation to combine Suzaki and Minowa to reject claims 1, 2, 10, 21, 23-27, 40 and 42, which claims have been amended merely to address changes required by the Examiner and/or could be easily anticipated by the Examiner - see MPEP § 706.07(a)), **then the rejection will be a new grounds of rejection.** As such the Office Action must be **NON-FINAL**.

IV. The combination of Suzaki and Minowa does not teach all of the elements of claims 1, 2, 7-10, 21, 23-27, 40 and 42.

To combine the teachings of prior art references to reject the claims of an application, an Examiner must show that the combination of references teaches all of the elements of the claims. See MPEP 2143.03 (and cases cited therein). For convenience, MPEP 2143.03 (and cases cited therein) is reproduced below:

2143.03 All Claim Limitations Must Be Taught or Suggested

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is non-obvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Applicants believe that Suzaki is distinguished from the present invention in that it does not provide detecting means to detect a characteristic indicative of movement in order to determine that an ink ribbon is present. Furthermore, Suzaki does not disclose a tape printing

apparatus, but a printer for printing on sheet paper whereby the print head is carried on a carriage supported on a guide shaft.

Minowa discloses a printing system capable of printing on sheets of paper and on label tapes. The thermal print head in this arrangement can alternatively be positioned over a platen for printing on sheet paper, or positioned to be in contact with a label tape cassette. However, Minowa does not disclose means to detect a characteristic of movement of the tape or any other method to establish the presence of the tape.

However Applicants submit that such a combination would not result in the present invention since neither of these documents disclose means for detecting a characteristic of movement of the ink ribbon.

Given that the combination of Suzaki and Minowa do not teach all of the elements of claims 1, 2, 10, 21, 23-27, 40 and 42, the rejection of claims 1, 2, 10, 21, 23-27, 40 and 42 must be withdrawn.

V. The Teachings of Minowa destroy the teachings of Suzaki

It is improper to combine references where the references teach away from their combination. In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). In the Office Action dated February 7, 2001, the Examiner combined the prior art references Suzaki and Minowa to reject claims 1, 2, 7-10, 21, 23-27, 40 and 42.

Suzaki discloses a printer for printing on sheet paper (not a tape printing apparatus) whereby the print head is carried on a carriage supported on a guide shaft. In the Suzaki

apparatus, the ink ribbon is held stationary during printing while the carriage moves from left to right.

Minowa discloses a printing system capable of printing on sheets of paper and on label tapes using a thermal print head. The thermal print head in this arrangement can alternatively be positioned over a platen for printing on sheet paper, or positioned to be in contact with a label tape cassette. Minowa discloses (col 5 lines 8-27) an arrangement for printing on a tape. Specifically, Minowa discloses (col 5 lines 14-16) “the ink ribbon moves off to the take-up reel in direction “F” at a constant speed.”

To combine the teaching of Minowa with Suzuki would destroy the printing mechanism taught by Suzuki. Accordingly, the rejection of claims 1, 2, 10, 21, 23-27, 40 and 42 must be withdrawn.

VI. Weber and the Instant Invention Are Not Analogous Art.

While Weber and the Instant Invention as embodied in claim 31 are both directed to mechanical devices, Applicants assert that the references are not analogous art. The MPEP §2141.01(a) provides guidance regarding analogous and non-analogous art, in general, and provides guidance regarding analogous prior art in the mechanical arts, in particular. For convenience, portions of the MPEP §2141.01(a) is reproduced in part below:

2141.01(a) Analogous and Nonanalogous Art

TO RELY ON A REFERENCE UNDER 35 U.S.C. 103, IT MUST BE ANALOGOUS PRIOR ART

The examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

The instant invention as embodied in claim 31 is directed to a cassette for use in a printing apparatus.

Weber describes an arrangement for determining the amount of film remaining in a film canister containing a segmented disk attached to the film spool. A sensing arrangement is described to detect the segments of the disk so that the number of rotations of the disk may be counted allowing the amount of film remaining on the spool to be calculated.

Applicants submit that there is no suggestion to use Weber's canister in a printing apparatus. Accordingly, the rejection of claim 31 over Weber must be withdrawn.

VII. The Rejection of Dependent Claims 41 and 43 cannot stand

Claims 41 and 43 were rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (UK 2-194-487 A) in view of Minowa (5,183,333) and further in view of Sims et al. (U.S. 5,610,648). Applicants respectfully traverse the rejection. This rejection relies on, as its foundation, the combination of Suzuki in view of Minowa. As such, the rejection is improper for the reasons given above.

CONCLUSION

The Examiner is urged to reconsider the invention claimed in view of the above and to indicate that claims 1-2, 4-6, 10-43 are allowed. If the Examiner believes that consultation with the attorney listed below would advance prosecution of this application, the Examiner is urged to contact the attorney listed below.

Respectfully submitted,



Felix J. D'Ambrosio

Reg. No. 25,721

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JONES, TULLAR & COOPER, P.C.
P.O. Box 2266 Eads Station
Arlington, VA 22202
(703) 415-1500

Version with Markings to Show Changes Made

1. (Four times amended) A tape printing apparatus for printing an image on an image receiving tape comprising:

a thermal print head for printing an image on an image receiving tape, said thermal print head having a first mode of operation and a second mode of operation;

receiving means for receiving in said first mode of operation a supply of image receiving tape and a supply of ink ribbon for providing an image on the image receiving tape, and in second mode of operation a supply of thermally sensitive image receiving tape;

driving means for driving the ink ribbon;

control means for controlling said thermal print head, and

detecting means for detecting [the presence or absence] a characteristic indicative of movement of the ink ribbon to determine if an ink ribbon is present or absent in said receiving means and for providing a signal to said control means indicative of the presence or absence of the ink ribbon, said control means acting to control said thermal print head to operate in said first mode of operation when the ink ribbon is present and in said second mode of operation when the ink ribbon is not present.

2. (Thrice amended) A tape printing apparatus for printing a label on an image receiving tape comprising:

a print zone;

a thermal print head located at said print zone for printing the label on the image receiving tape as the image receiving tape passes through said print zone, said thermal print head having a first mode of operation and a second mode of operation;

control means for controlling the thermal print head;

receiving means for receiving in said first mode of operation a supply of image receiving tape and a supply of an ink ribbon for providing an image on the image receiving tape and in said second mode of operation a supply of thermally sensitive image receiving tape;

detecting means for detecting a characteristic indicative of the presence or absence of the ink ribbon and for providing a signal to the control means indicative of the presence or absence of the ink ribbon, wherein said control means controls the print head to have said first mode of operation when ink ribbon is present and said second mode of operation when no ink ribbon is present; [and]

cutting means for separating the printed label from the supply of the image receiving tape;
and

a support member to support the ink ribbon, wherein said support member having a first position when the ink ribbon is present and a second position when no ink ribbon is present, said detecting means being positioned to detect a characteristic indicative of the position of said support member to determine if the ink ribbon is present or absent.

4. (Twice amended) A tape printing apparatus as claimed in claim [3] 2, further comprising:

driving means for driving the ink ribbon, wherein said support member is a rotatable support member having gear means, said gear means having a first position in which said gear means is coupled to said driving means when the ink ribbon is present and a second position when the ink ribbon is not present, said detecting means being positioned to detect a

characteristic indicative of whether said gear means is in said first position or said second position.

6. (Twice amended) A tape printing apparatus as claimed in any of claims [3] 4 to 5, wherein said detecting means is positioned to detect the position of the support member.

25. (Thrice amended) A tape printing apparatus as claimed in claim 1, wherein in said first mode of operation, the image receiving tape and the ink ribbon are received in a first cassette[and in a second cassette], and in said second mode of operation, the image receiving tape is received in a second cassette.

31. (Twice amended) [A cassette comprising a housing in which a reel holding a supply of tape is arranged, said reel being rotatable with respect to said housing and having a plurality of markings thereon, said housing being arranged so that said markings are detectable by [a] detecting [arrangement] means external to said cassette to provide information relating to the rotation of said reel.]

A cassette for use in a printing apparatus comprising a housing in which a reel holding a supply tape is arranged, said reel being rotatable with respect to said housing and having a plurality of markings thereon, said housing being arranged so that said markings are detectable by a detecting arrangement external to said cassette to provide information relating to the rotation of said reel.